

Nested MicroStation References at WSDOT?

Reference Toolbox

Overview

WSDOT CAE policy is that deliverables do not include nested references per the Electronic Engineering Data Standards (EEDS) manual.

While working in a project with multiple base plans - three or more - individually referencing each file for each sheet may get to be cumbersome. Using nested references certainly allows relating multiple base plans at once through a common base or similar file. However, data management issues experienced while attempting to maintain control of the nested files has prompted WSDOT to discourage their use.

The process outlined in this tech note provides a middle ground, providing the file creation speed of nesting references, and then converting those nested references to direct references according to the WSDOT EEDS manual.

Process

Before we begin we need to have a few things in place. We need to have several base plans, and a sheet layout needs to have been established. Both sheet border locations and saved views need to be in the alignment base plan. We then create a container file, reference the base plans, bring that information into the sheets, and finally, converting the nested references to direct.

Creating a Container File

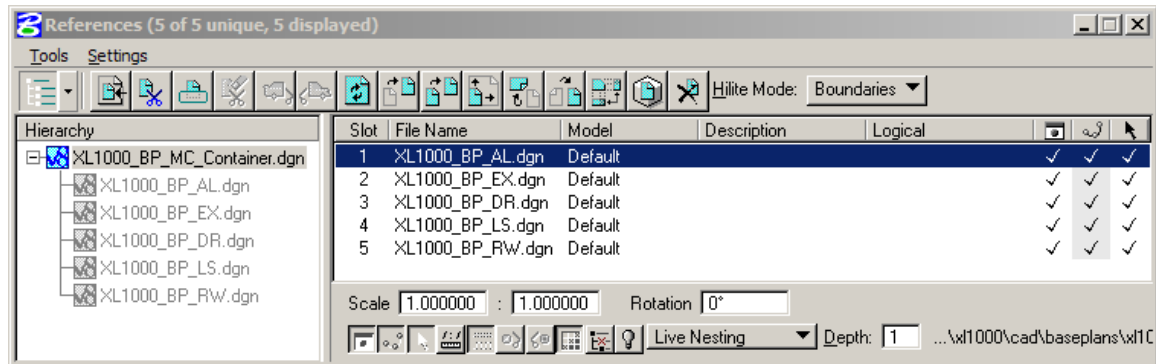
In this case, a container file is an empty base file that serves as a focal point for the other base plans. It will contain no elements - only saved views, and will reference all the other project base plans.

1. Create a new file using the **PSE_Base.dgn** seed file.

In this example the container file is **XL1000_BP_MC_Container**.

2. Using the References dialog, attach each of the project base plans as direct references.

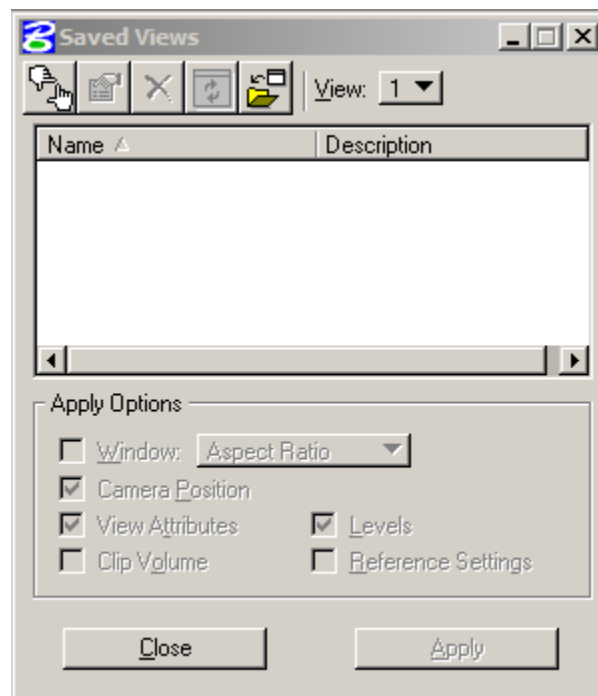
Use the **Coincident World** method, and make sure the *ignore attachment when live nesting* option is **OFF**.



Importing the Saved Views from the Alignment File

The sheet location saved views from the alignment plan need to be copied over into the container file. These saved views will be used when referencing the container file from the sheet files.

3. Select the *Utilities > Saved Views* command to open the Saved Views dialog.



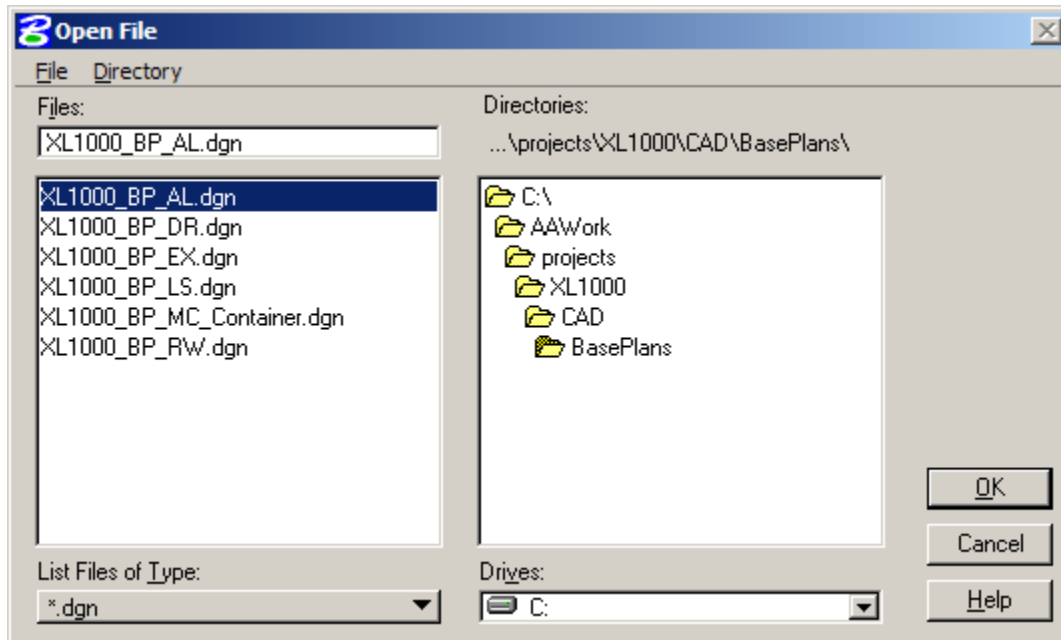
4. Click on the **Import Saved View** icon. 

This opens an Open File dialog.

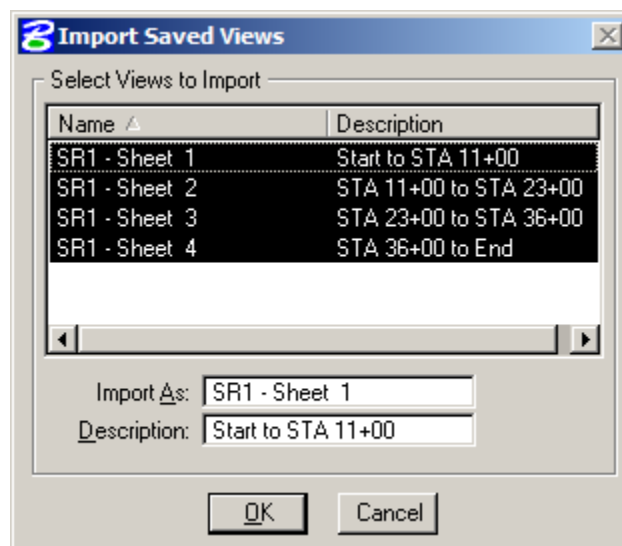
5. Navigate to the *Alignment base plan*, select it and click **OK**.

This opens the Import Saved Views dialog.

In this example, the alignment base plan is **XL1000_BP_AL**.



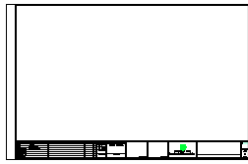
6. In the Import Saved Views dialog, select all the desired saved views, and click **OK**.



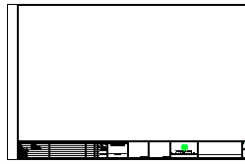
Creating the Sheet File

Create sheet files and place sheets normally.

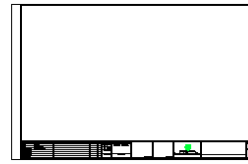
7. Create a new file using the **PSE_Sheet.dgn** seed file.
In this example the sheet file is **XL1000_PS_IC**.
8. Place sheets normally using the **WSDOT Place Sheets** utility.



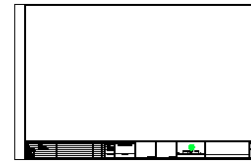
Plot 1



Plot 2



Plot 3



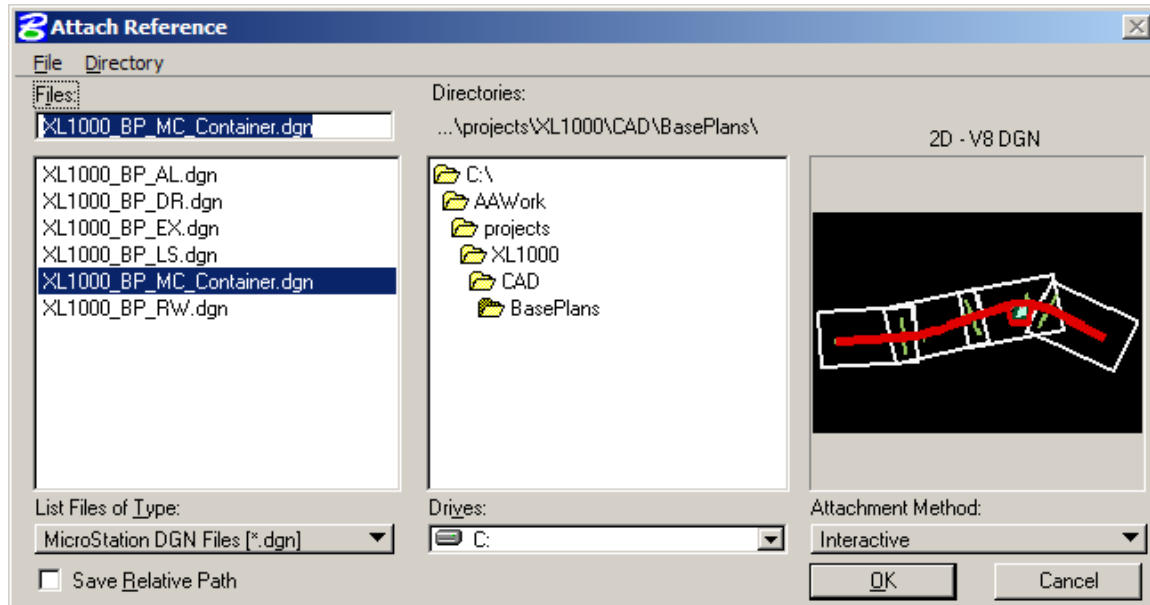
Plot 4

Referencing the Container File from the Sheet File

By referencing the container file, with a nested depth setting of 1, we can place, move, clip, and mask all the base plans at once for each sheet.

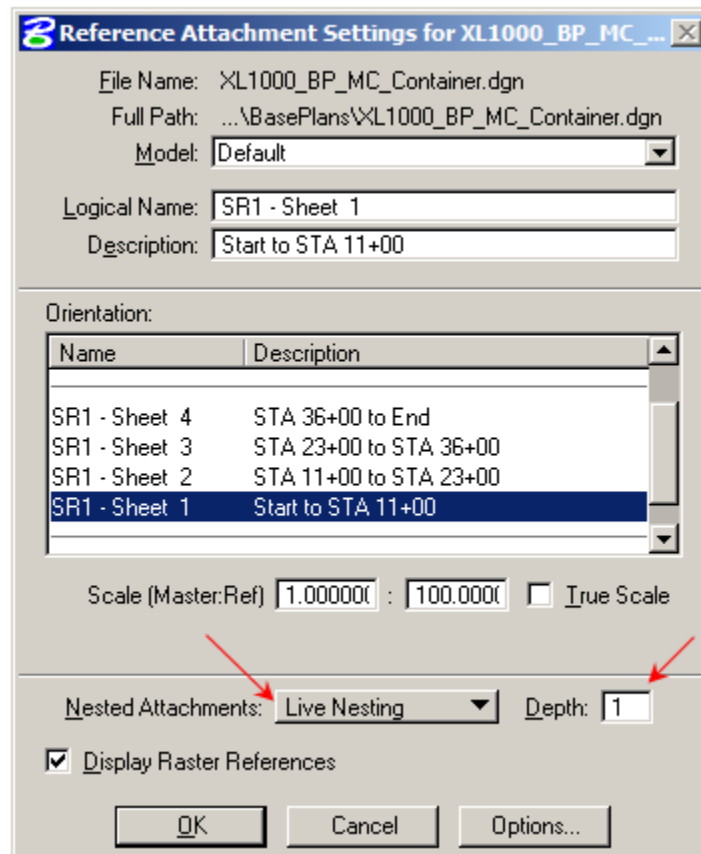
1. Open the reference dialog, and start to attach a new reference.
2. Set the *Attachment Method* to **Interactive** and select the container file.

In this example the container file is **XL1000_BP_MC_Container**.



3. Click **OK** to open the Reference Attachment Settings dialog.
4. Select the first saved view and set the scale as normal.
5. Set the *Nested Attachments* setting to **Live Nesting**.
6. Set the *Depth* setting to **1**.

The Depth must be set to 1 or the conversion to direct references will only convert the first depth of references.



7. Click **OK**, and place normally.
8. Align the sheet borders and clip the reference limits normally.
9. Clip any masks that apply to all references.
10. Repeat the process for the remaining sheets.

For questions or comments on this tech note, contact your regional CAE Support Coordinator or the WSDOT CAE Help Desk at (360) 709-**8013**.